

CLAIMS

1. A motorcycle comprising:

a frame;

an engine/transmission assembly mounted to said frame and having an

5 output shaft rotating in response to operation of said engine/transmission

assembly;

a drive sprocket mounted to said output shaft for rotation therewith;

a swingarm pivotably mounted to at least one of said frame and

engine/transmission assembly for pivotal movement within a range of motion;

10 a rear wheel mounted to said swingarm for rotation with respect to said

swingarm;

a wheel sprocket mounted to said rear wheel for rotation therewith;

a flexible drive member coupling said drive sprocket and said wheel

sprocket such that said rear wheel is caused to rotate in response to operation of

15 said engine/transmission assembly; and

a tensioner fixed to at least one of said frame and engine/transmission

assembly against both pivotal and translational movement with respect to said

output shaft, wherein said drive sprocket, said wheel sprocket, and said tensioner

are sized and positioned such that a belt path length defined by said drive

20 sprocket, said rear sprocket, and said tensioner remains substantially constant as

said swingarm pivots through said range of motion.

2. The motorcycle of claim 1, wherein said tensioner includes a bracket fixedly mounted to at least one of said engine/transmission assembly and frame, said tensioner further including a roller mounted for rotation to said bracket and in contact with said drive member, said roller rotating with respect to said bracket in response to movement of said drive member.

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3. The motorcycle of claim 1, further comprising a pivot member interconnecting said swingarm to at least one of said frame and engine/transmission assembly and defining a pivot axis about which said swingarm is pivotable, wherein said output shaft and drive sprocket are rotatable together about an output shaft axis of rotation, and wherein said pivot axis and said axis of rotation are non-collinear.

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4. The motorcycle of claim 1, wherein said drive member includes a drive belt.

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5. The motorcycle of claim 1, wherein said swingarm is pivotably mounted only to said engine/transmission assembly.

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6. The motorcycle of claim 1, wherein said swingarm is pivotably mounted only to said frame.

7. The motorcycle of claim 1, wherein said tensioner is fixed only to said engine/transmission assembly.

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8. The motorcycle of claim 1, wherein said tensioner is fixed only to
said frame.

9. A method for tensioning a motorcycle flexible drive member, the method comprising:

- providing a motorcycle frame and a swingarm;
- 5 mounting an engine/transmission assembly to the motorcycle frame, the engine/transmission assembly having an output shaft rotating about an axis of rotation in response to operation of the engine/transmission assembly;
- mounting a drive sprocket to the output shaft for rotation therewith;
- 10 mounting a rear wheel to the swingarm for rotation with respect to the swingarm;
- mounting a wheel sprocket to the rear wheel for rotation therewith;
- 15 pivotably interconnecting the swingarm with at least one of the frame and engine/transmission assembly to permit pivotable movement of the swingarm in a range of motion about a pivot axis that is non-collinear with the axis of rotation of the output shaft;
- coupling the drive sprocket and the wheel sprocket with a flexible drive member such that the rear wheel rotates in response to rotation of the output shaft;
- mounting a tensioner to at least one of the engine/transmission assembly and frame such that the tensioner applies tension to the drive member;
- 20 fixing the tensioner against translational and pivotable movement with respect to the engine/transmission assembly and frame; and
- pivoting the swingarm through the range of motion while maintaining a substantially constant belt path length defined by the drive sprocket, the wheel sprocket, and the tensioner.

10. The method of claim 9, wherein the act of mounting a tensioner includes providing a tensioner bracket and a tensioner roller and mounting the tensioner bracket to at least one of the frame and engine/transmission assembly, wherein the act of fixing the tensioner includes fixing the tensioner bracket against translational and pivotable movement with respect to the engine/transmission assembly and frame and rotatably mounting the tensioner roller to the tensioner bracket, and wherein the act of pivoting the swingarm includes contacting the drive member with the tensioner roller to apply tension to the drive member, and further comprising rotating the tensioner roller in response to movement of the drive member.

11. The method of claim 9, wherein the act of pivotably interconnecting the swingarm includes pivotably interconnecting the swingarm only to the engine/transmission assembly.

12. The method of claim 9, wherein the act of pivotably interconnecting the swingarm includes pivotably interconnecting the swingarm only to the frame.

20 13. The method of claim 9, wherein the act of mounting the tensioner includes mounting the tensioner only to the engine/transmission assembly.

25 14. The method of claim 9, wherein the act of mounting the tensioner includes mounting the tensioner only to the frame.

15. The method of claim 9, wherein the act of coupling includes coupling the drive sprocket and wheel sprocket with a flexible drive belt.